JOINT MESSAGE FORM

SPACE BELOW RESERVED FOR CLASSIFICATION CENTER

ACTION
OPERATIONAL IMMEDIATE
OPERATIONAL IMMEDIATE

FROM
CHIEF, AFIRM FIELD OFFICE, VAFB, CALIF

TO
AFIRM, LOS ANGELES 45, CALIF

SPECIAL INSTRUCTIONS

AFIRM TECHNICAL EVALUATION STAFF, P.O. BOX 1547, VAFB, CALIF (COURIER)

DEPT-61-44 (L. F. MORGAN); LMSD/VAFB FOR DEPT 61-44 AND 61-70; DAC FOR K. PURDY, INFO FOR 1MD FOR COMMAND POST; AFIRM TECH EVAL STAFF

FOR MR. FISCHER. SUBJECT: FLASH REPORT OF LAUNCHING OF DISCOVERER XIV (NIGHT SHIFT-PRESTO) FROM VANDERBERG AFB.

1. VEHICLE CONFIGURATION:

1.1. SATELLITE VEHICLE, LOCKHEED MODEL 2203, SERIAL NO. 1056

SEPARATION WEIGHT 9,663 LB.

CLASSIFICATION CHANGED TO

205-2
5 APR 1965

SECRET/WDC-16-4/1-29

LOSA FOR WDCY, 6594TH IN FOR 2LT COL MATHISON; LMSD/SUNNYVALE FOR

DEPT 61-44 (L. F. MORGAN); LMSD/VAFB FOR DEPT 61-44 AND 61-70; DAC FOR K. PURDY, INFO FOR 1MD FOR COMMAND POST; AFIRM TECH EVAL STAFF

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SEPARATION WEIGHT 9,663 LB.
1.2. FIRST STAGE, THOR DM-18, SERIAL NO. 237, MODIFIED TO
UTILIZE A STRUCTURAL ADAPTER TO THE SATELLITE VEHICLE.

DATE AND TIME OF LAUNCH 18 AUGUST 1960 AT 1257:07:39 NOT INTO A
POLAR ORBIT AT AN ORBIT INJECTION AZIMUTH OF APPROXIMATELY 172
DEGREES.

3. PRIMARY OBJECTIVES. SEE BASIC DTO, JMED DOCUMENT NO. 465725
AND APPENDIX "F".

4. THE PRIMARY OBJECTIVE TO ATTAIN AN ORBIT WAS SATISFACTORY
ACHIEVED AS RECORDED BY ACQUISITION ON TRACKING AIDS AT KODIAK;
ANNETTE AND VAFB ON THE FIRST PASS.

4.1. PRIMARY OBJECTIVE OF THE THOR BOOSTER TO CARRY THE
DISCOVERER SATELLITE TO THE PLANNED SEPARATION ALTITUDE AND VELOCITY
WAS DEMONSTRATED. MAIN ENGINE BURNING TIME WAS APPROXIMATELY 165.0
SECONDS WITH VERNIER CUT-OFF APPROXIMATELY 9.47 SECONDS LATER.

4.2. THE PRIMARY OBJECTIVE OF THE SATELLITE AIRFRAME TO WITHSTAND
THE CONTROL SYSTEM PERTURBATIONS AND ENVIRONMENTAL CONDITIONS WAS
SATISFACTORY INDICATED THROUGH ORBIT INJECTION. SEPARATION
OCCURRED APPROXIMATELY 7.84 SECONDS AFTER VERNIER ENGINE CUT-OFF.

4.3. THE PRIMARY OBJECTIVE OF THE AGENA PROPULSION SYSTEM TO
PROVIDE THE ADDITIONAL TOTAL IMPULSE TO ATTAIN ORBIT WAS SATISFACTORY
DEMONSTRATED. SECOND STAGE IGNITION OCCURRED AFTER A COAST PERIOD
OF APPROXIMATELY 95.3 SECONDS AFTER SEPARATION. AGENA ENGINE BURNING
TIME OF 115.8 SECONDS WAS ACHieved THUS INDICATING PROPER PROPELLANT
UTILIZATION. THE TOTAL IMPULSE DESIRED WAS OBTAINED AS EVIDENCED
BY THE BURNSOUT VELOCITY OF APPROXIMATELY 26,000 FT PER SECOND AS

DATE: 20-3
Determined from the plot board charts.

4.4. The Agena APU System satisfactorily demonstrated acceptable performance of components and ability to supply power requirements through the first pass.

4.5. The ability of the Agena guidance and control system to derive the time to initiate and terminate orbital boost at the proper time was satisfactory. An injection angle of approximately 0° was achieved. A vehicle attitude stabilization problem was indicated on pass one by abnormal output in the horizon scanner pitch and roll channels and greater than normal control gas consumption.

5.6. The primary objective of the satellite airborne and ground telemetry, tracking and command system was demonstrated satisfactorily through orbit injection.

5. All secondary objectives through the first pass were achieved.

6. All tertiary objectives were achieved through the first pass.

7. The following additional information is submitted:

(a) The TLM-18 VME tracked for 456 seconds.

(b) The injection altitude was approximately 120 statute miles.

8. Pad damage was minimal. Pad recovery time of approximately five working days is expected.